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## **MDU'S NEW WIND FARM SPINS OUT POWER**

*By Becky Shay*

**BAKER** - A wind farm southeast of here started generating power Saturday and could be fully operational by the end of the month.

Montana Dakota Resources Group is building the Diamond Willow wind farm, which at completion will include 13 wind turbines with a total capacity of 191/2 megawatts. That's enough energy to power about 7,000 residences, MDU spokesman Mark Hanson said.

As part of the \$38 million project, MDU built a substation on the land it leased about 10 miles southeast of Baker. The substation went on line Dec. 19, and the first turbine was energized Dec. 29, Hanson said. By the new year, five turbines were complete, four other towers built and waiting for rotors and another partially constructed.

Having the rest of the towers running by the end of January is weather-dependent, but so far the project is ahead of schedule.

"It's going along really well," Hanson said.

The general contractor, Wanzek Construction Inc. of Fargo, N.D., was on-site in early September, foundation work began in late October and most of the equipment for the towers arrived in early December, Hanson said.

The wind farm is on private and county land that MDU is leasing, Hanson said. The area is energy-rich, with oil rigs pumping near the turbines and natural gas stations dotting the land.

The towers are erected using cranes that lift sections into place. A crane - which is actually larger than standard construction cranes - is used to put the lower and middle tower sections in place. A larger crane puts the top section, equipment housing and blades on the towers, which stand 262 feet high.

"The ironic thing about doing this kind of work is if it's a really windy day, you can't put those top parts on," Hanson said. "But you're putting the towers in a place where, hopefully, you're getting a lot of wind."

The blades, which are 121 feet long, will begin to turn with wind of 6 mph or 7 mph, Hanson said. As soon as they are turning at a consistent rate, they start producing energy, which goes into the power grid. The blades reach capacity at wind speeds of about 25 mph.

Montana law requires providers to have 5 percent of energy delivered to meters this year come from renewable sources. The requirement increases to 10 percent by 2010 and 15 percent by 2015.

"This meets the requirement for us through 2010," Hanson said.

Providers of wind power must have a backup source, called "firming power," which MDU has from other sources, to keep transmission lines loaded and energy delivery consistent.

"Wind is a good supplemental, but it just can't be your base load because the wind doesn't always blow," Hanson said.

MDU has researched and tried to get into the wind power business for about 25 years, Hanson said. Those projects, which were to be built and owned by other companies, didn't come to fruition.

"This one, we will own and operate," he said.

MDU will have two full-time technicians working at the wind farm once it is completed, Hanson said. Workers access the top of the tower by climbing a ladder on the inside, Hanson said.